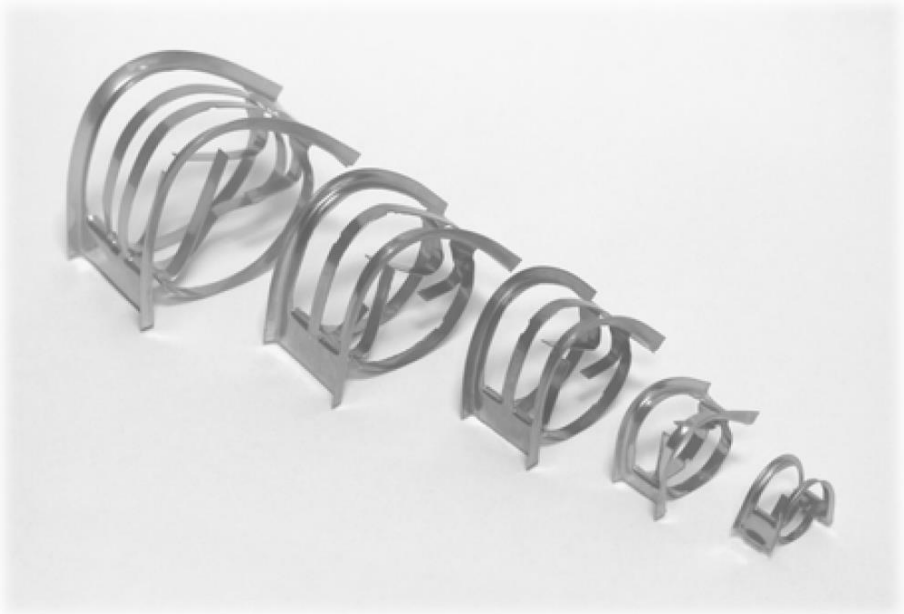
Raschig RI-Ring

Product Bulletin 901



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Raschig RI-Ring

The Raschig RI-Ring resembles the well-known “third generation” packing type that is widely used in the chemical and petrochemical industry. Decades of experience allow for reliable design with high capacities and low pressure drops.

RI-Ring
(equivalent to IMTP)

Size	Surface (m^2/m^3)	Free Vol. %
15	300	96
25	235	97
40	150	97
50	98	98
60	85	98
70	60	98

The RI-Ring type is often replaced with the high performance random packing types Raschig Super-Ring® and Raschig Super-Ring PLUS®. These allow for considerable improvements in capacity, pressure drop, separation efficiency and fouling resistance.
Let us know if you are interested in an alternative solution for your application.

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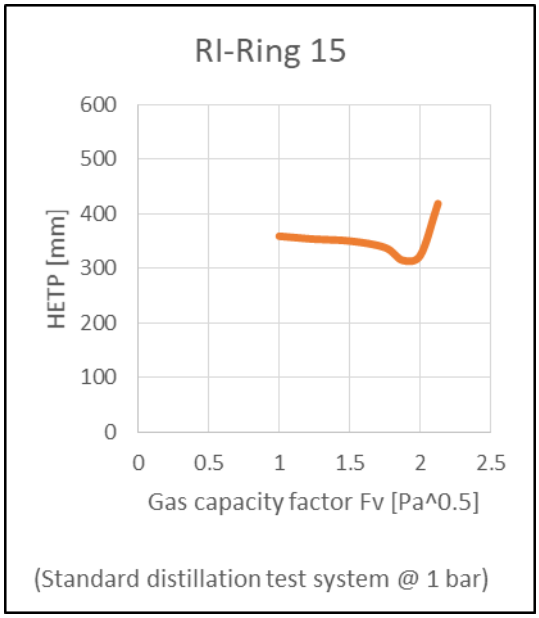

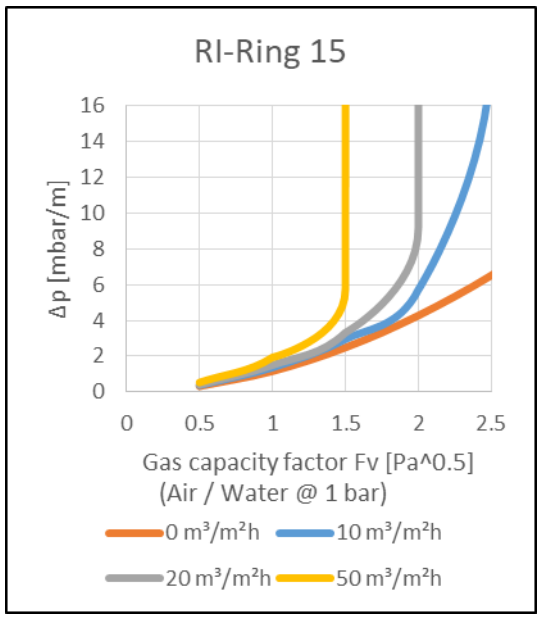

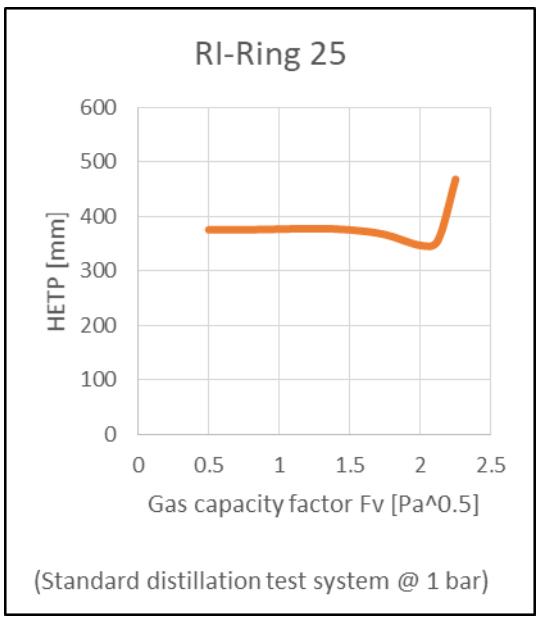

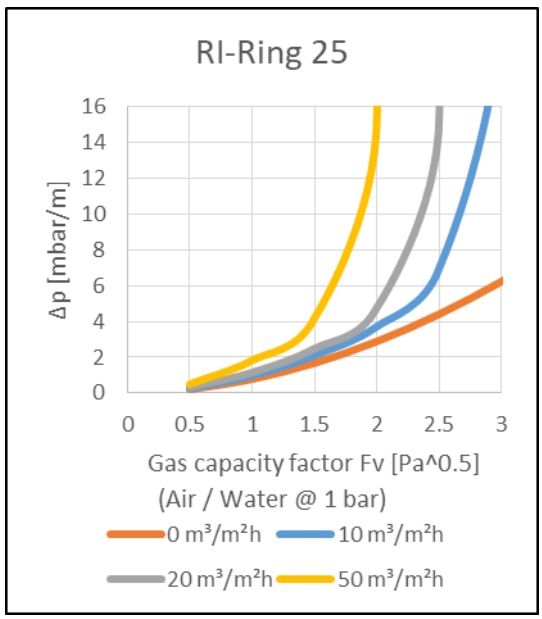

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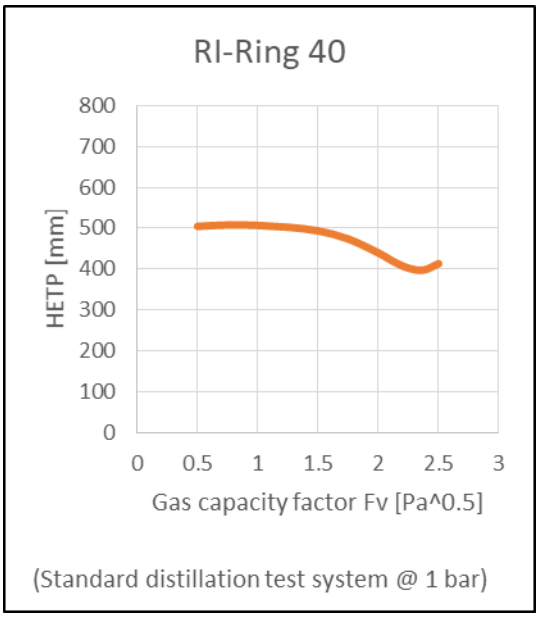

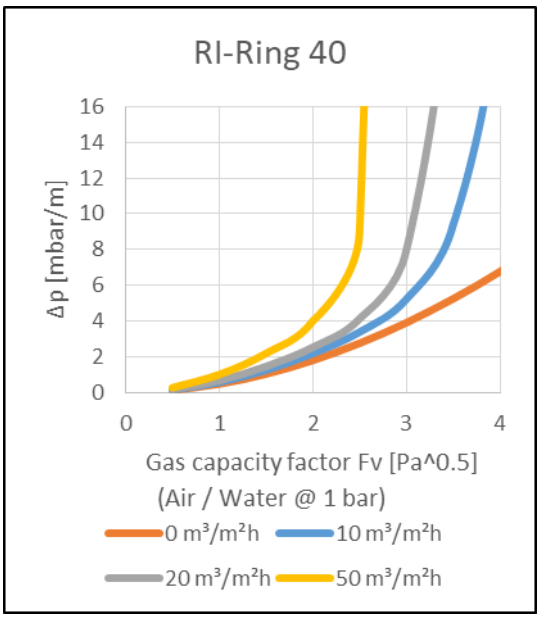

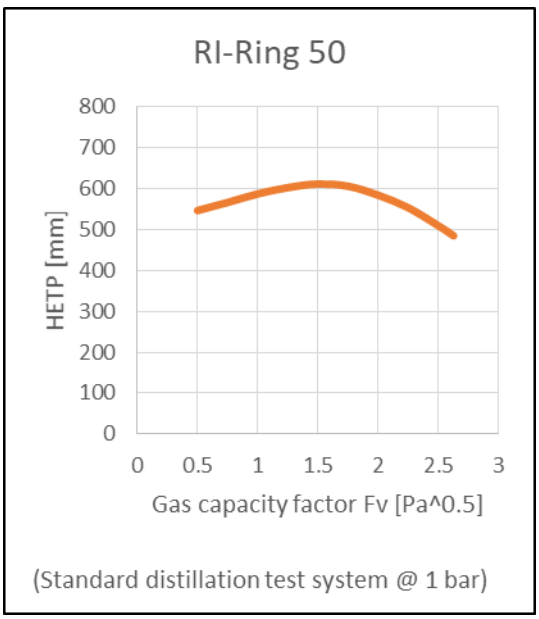

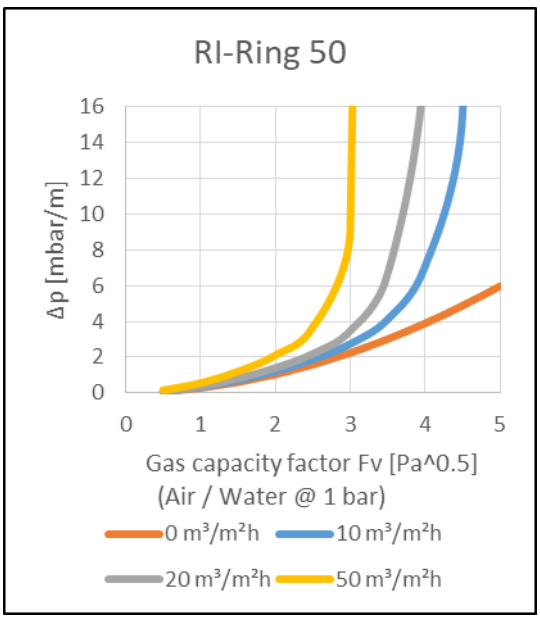

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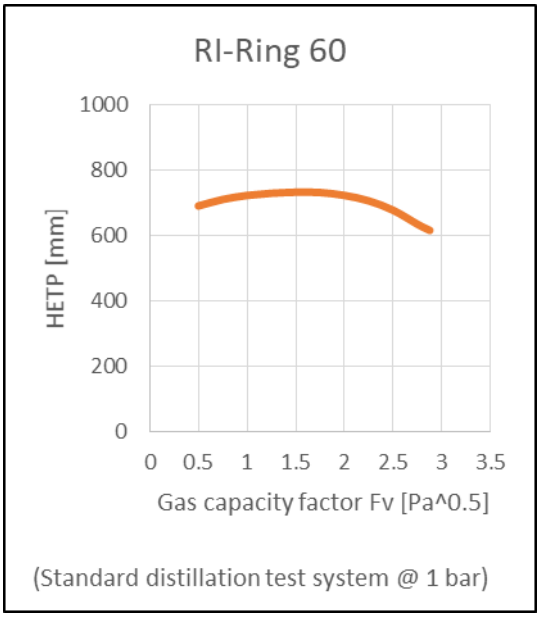

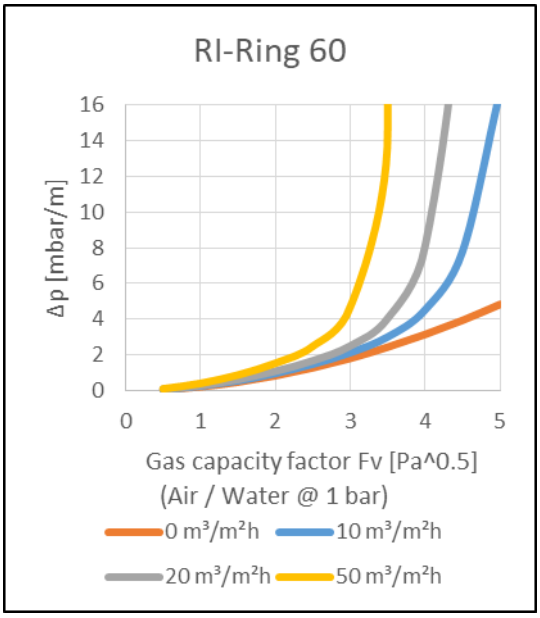

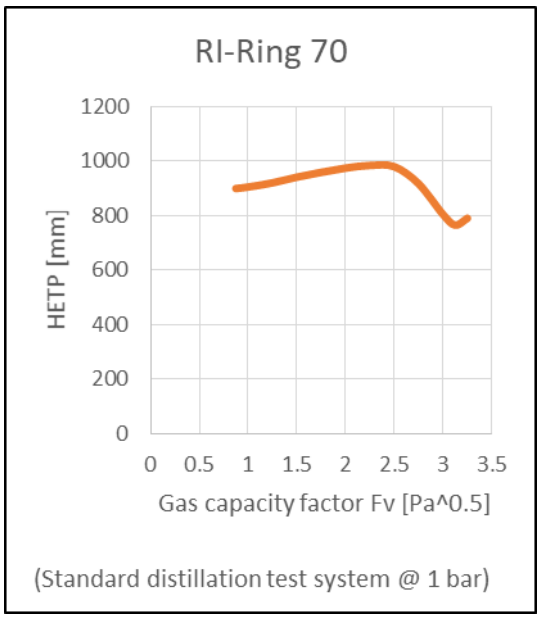

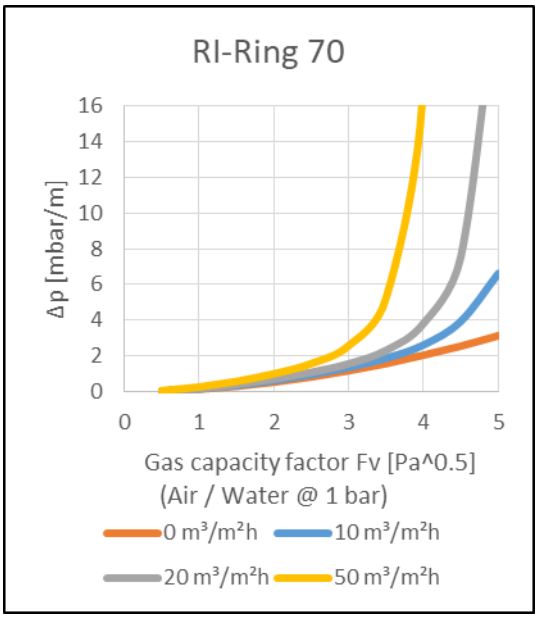

Nomenclature

Latin symbols

a	m^2/m^3	specific surface area of packing
a_{Ph}	m^2/m^3	specific effective surface area of packing
C_S	m/s	$= u_V (\rho_V /(\rho_L - \rho_V))^{1/2}$ capacity factor
D_S, d_S	m	column diameter
F_V, F_G	m/s $(kg/m^3)^{1/2}$	$= u_V (\rho_V)^{1/2}$ gas capacity factor
F	-	Packing factor
g	m/s^2	$= 9.81\ m/s^2$, acceleration
H	m	section height
HETP	m	height equivalent to a theoretical plate
HTU_{OV}	m	overall gas side height of a transfer unit
$k_G a_{Ph}$	1/s	volumetric mass transfer coefficient in gas phase
$k_L a_{Ph}$	1/s	volumetric mass transfer coefficient in liquid phase
L	kg/h	Liquid mass flow rate
h_L	m^3/m^3	superficial liquid hold-up
n_{th}	-	number of theoretical stages
p	bar	pressure
u_L	m^3/m^2h	superficial liquid velocity
u_V	m/s	superficial gas velocity
V, G	kg/h	Vapor mass flow rate

Greek symbols

$\beta_V a_{Ph}$	1/s	volumetric mass transfer coefficient in gas phase
$\beta_L a_{Ph}$	1/s	volumetric mass transfer coefficient in liquid phase
ρ_L	kg/m^3	liquid density
ρ_V	kg/m^3	gas density
$\Delta p/H$	mbar/m	specific pressure drop
η	Pas, kg/(ms)	dynamic viscosity

Subscripts

Fl	flooding condition
L	liquid phase
V	vapour phase